

REMARKS

A second declaration of inventor Dr. Peter Jepson (referred to herein as "the second declaration") is submitted herewith.

Rejection under 35 U.S.C. §103

Claims 1, 3 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over United States Patent Application Publication No. US 2002/0072475 A1 ("Michaluk"). Applicants respectfully traverse this rejection.

In the process of making refractory metal plates of the present invention, a series of forge and anneal steps are used to make the plate. This combination of processing steps provides a refractory metal plate having a significantly more uniform texture, as compared to prior art plates. This uniformity is found through the thickness of the plate and across the surface of any plane which is orthogonal to the thickness of the metal plate.

As previously noted, Michaluk discloses niobium metal articles (e.g., sputtering targets) that have homogeneous texture through the thickness of the product only.

It is asserted in the Office Action that because Michaluk teaches the presence of {100} and {111} crystallographic orientations and a uniform texture in the sputtering component that any texture variation of Michaluk is very small, thus inherently falling within the

"...{100} and {111} crystallographic orientations that varies by less than 30 percent across the surface of any plane of said refractory metal plate..." limitation of claim 1. Applicants respectfully disagree with this assertion.

As established in the second declaration of Dr. Jepson, the texture variation of the niobium plate made by Michaluk does not fall within the above claim limitation. Applicants have provided in the second declaration a quantitative basis for this statement. Although Michaluk uses the words "uniform" and "homogenous" to describe his plate, the plate is anything but uniform in texture, as explained in the declaration. The inventive sample prepared as described in the second declaration meets this claim limitation, while the comparative sample prepared according to the method of Michaluk does not. As the method of making the niobium plate described

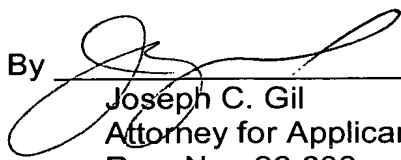
in Michaluk is significantly different from the process of making refractory metal plates of the present invention, the process of Michaluk cannot inherently result in a plate having the same properties as the plate of the present invention. It should be noted that Michaluk does not provide any indication that measurements of uniformity of texture across the surface of a plane orthogonal to the thickness of the metal plate were even made; indeed, no examples at all are provided in the patent. Applicants respectfully submit that the niobium plates Michaluk do not fall within the language of Claim 1, and that the disclosure of Michaluk does not render the present claims obvious.

It is asserted in the Office Action that Plate 286 described in the first and second declarations is insufficient to provide evidence of superior properties across a wide range of operating conditions. Applicants respectfully disagree with this assertion. As set forth in the second declaration, annealing times and temperatures are well known in the art. The uniformity of texture provided by the method of making tantalum plates of the present invention would be expected to occur across the entire range of standard times and temperatures for the various process steps, as would be understood by one skilled in the art. Applicants have provided more than sufficient evidence of the superior properties of the tantalum plates of the present invention. Applicants respectfully request withdrawal of the §103 rejection.

CONCLUSION

Applicants submit that all outstanding issues have been addressed, and that Claims 1, 3 and 5 are in condition for allowance. Such action is respectfully requested at an early date.

Respectfully submitted,

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